

We claim:

1. An apparatus for progressive solar based power generating system including in combination:

a solar collecting system to concentrate and direct sun radiation;

a steam generator are held in place with said solar collecting system for holding water and producing superheated steam, includes an internal vessel incorporated with an external vessel to form a chamber, an insulated material fills the vacuum section between the internal and external vessels to preserve the water temperature, and,

a set of heating plates inserted in the steam generator with small parts of plates exposed outside of said steam generator to absorb and convey concentrated heat from solar energy thereby inducing water temperature and produce superheated steam;

a combustion chamber directly beneath the steam generator for maintaining the superheated steam production using biomass or natural gas when solar energy is unavailable or insufficient;

a steam turbine and electric power generator positioned to receive steam from said steam generator for producing a mechanical rotary motion and converting the mechanical rotary motion into electricity;

a condensation collector for collecting and condensing the remnant of steam after steam to electricity conversion;

a water collecting system with filter for collecting and filtering rain or water from other sources;

a reservoir attached to both the condensation collector and water collecting system for storing and releasing water collected from said condensation collector and water collecting system;

a water turbine and electric power generator assembly positioned beneath said reservoir to receive water for producing a mechanical rotary motion, and converting the mechanical rotary motion into electricity;

a water-recycling tank for collecting the remaining water after hydroelectric energy conversion and redirecting the said remaining water to said steam generator as needed.

2. The combination according to claim 1, wherein said solar collector includes arrays of bi-convex lenses and parabolic mirrors driven by servo control unit that reflect and magnify sun radiation to the exposed portion of heating plates which are inserted in the water of said steam generator, thereby inducing water temperature in said steam generator to form superheated steam;

3. The combination according to claim 1, wherein said heating plates, which are sheets made of rust-free and heat conductive materials with large portion of the sheets immersed into the water in the steam generator intersecting each other with space between the plates. A small part of each plate on two edges, which are parallel with each other, are exposed outside of said steam generator to absorb and convey solar radiation, thereby increasing water temperature in the said steam generator to form superheated steam;

4. The combination according to claim 1, wherein said combustion chamber attached to the base of said steam generator includes a chimney, a thermal control, a heating compartment with a grill, covered by a dual function plate which is made of heat conductive material to absorb and convey both solar radiation and supplemental heat, said combustion chamber initiates heating function using biomass or natural gas to maintain superheated steam production when necessary;

5. The combination according to claim 1, wherein said condensation collector in an elevated position includes a gable hood with adjoining trough on each of the lower edges and horizontally angled with the lower part of the hood attached to the open end of reservoir, collects remnant of steam after steam-to-electrical energy conversion and delivers water from the condensed steam into reservoir;

6. The combination according to claim 1, wherein said water collecting system is connected to the reservoir, including a funnel coupled with a filter and valve to filter and collect rain, or water from other sources;

7. The combination according to claim 1, wherein said reservoir in the same elevation with said condensation collector, includes a container with a gable roof that matches the hood of condensation collector, receives and stores water from both condensation collector and water collecting system one end of the gable of the reservoir receives water from said condensation

collector, the other end of the gable is connected to and receives water from the water collecting system, a water chute with a flow valve extended from the base of reservoir, releases water down to its original elevation where water turbine and generator assembly are positioned. Preferably, condensation collector, reservoir, and water collecting system are made of rust-free material;

8. The combination according to claim 1, wherein said water-recycling tank is placed for receiving remaining water after hydroelectric energy is extracted and release water back into said steam generator as needed to start the cycle, includes supply piping, water pump coupled with said water-recycling tank.